SAN BERNARDINO COUNTY
INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

I. Project Label:

APN: 450-201-10*
APPLICANT: Hi-Grade Materials Co.
PROPOSAL: A Mining Conditional Use Permit and Reclamation Plan (originally proposed 10/18/99) for existing 90 acre and new 120 acre aggregate pits with a concrete batch plant, asphalt and concrete recycling plants, requiring 2 roads to be vacated.
COMMUNITY: Lucerne Valley/1st Supervisorial District
LOCATION: One mile south of Hwy 18, along both sides of Meridian Road
JCS/INDEX: 10507SM1/DN334-89
STAFF: Melinda Wright
REP('S): Lori Clifton

USGS Quad: Lucerne Valley

T,R,Section: Portions of T4N, R1E Sect. 19, 30 and T4N, R1W Sect. 25

Thomas Bros: Pgs. 4481 and 4570 (2004 ed.)

Planning Area: Lucerne Valley

OLUD: RL-20 and IC

Improvement Level: IL-4

* Assessor Parcel Nos.: 449-111-23 & 26, 450-201-10, 21, 25, 29, 33

PROJECT DESCRIPTION:

1. Project title: Hi-Grade Materials Co. Lucerne Valley Gravel Pit.

2. Lead agency name and address: San Bernardino County Land Use Services Department/Advance Planning Division, 385 N. Arrowhead Ave., San Bernardino, CA 92415.

3. Contact person and phone number: Melinda Wright, Senior Associate Planner, (909) 387-4147.

4. Project location: One mile south of Hwy 18, along both sides of Meridian Road, Lucerne Valley.

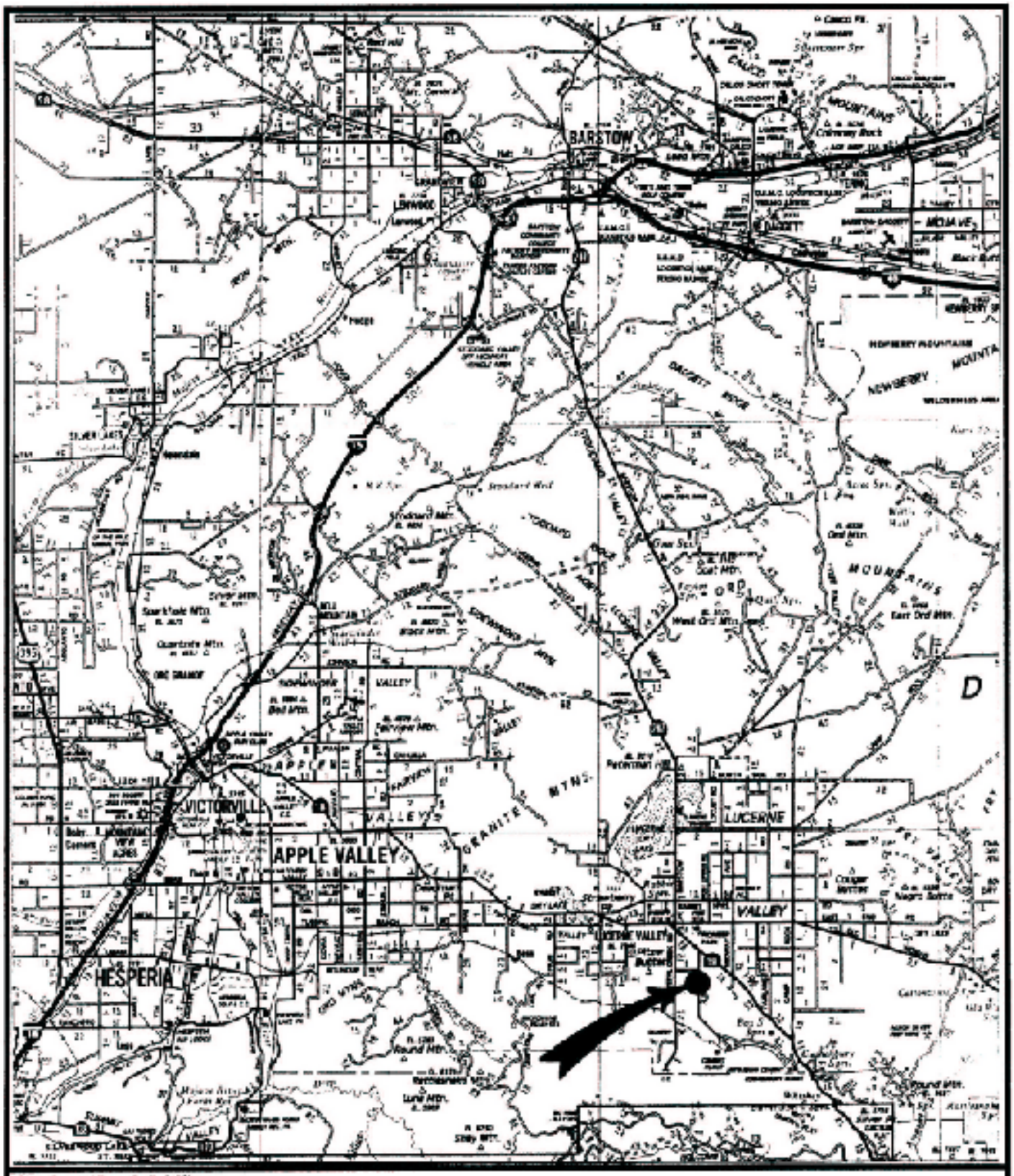
5. Project sponsor's name and address: Hi-Grade Materials Co., 17671 Bear Valley Road, Hesperia, CA 92345

6. Description of project:

Project Overview

Hi-Grade Materials Co. currently operates a sand and gravel pit on the east side of Meridian Road, approximately one mile south of Highway 18 in the Lucerne Valley area (Figure 1). The property is a gently sloping alluvial fan at the northern foothills of the San Bernardino Mountains (Figure 2). The existing operation (Figure 3) was permitted on 80 acres, with Reclamation Plan 81M-005, which had an expiration date of 2001. Operations continue under a Temporary Use Permit (TUP) to allow the operator to revise their Conditional Use Permit (CUP), Reclamation Plan and Financial Assurance.

The proposed project includes a new 120-acre pit on the west side of Meridian Road, and an 10-acre extension of the existing pit, for a total of 210 acres (Figures 4 and 5). The existing east pit would be mined to an average depth of approximately 250 feet, and the proposed west pit would be mined to an approximate depth of 200 feet. Site operations are proposed for 50 years. A maximum of 1,100,000 tons per year would be mined and processed, in comparison to the current operational rate of 240,000 tons per year. Approximately 1,200 cubic yards of concrete are produced per day. No increase is proposed for concrete production. Material would be exported from the site, with a daily average of 50 trips per day of aggregate, and 8 trips per day of ready-mix concrete. A maximum of 170 trips per day of aggregate is expected on a intermittent basis, to meet demand. The number of employees is expected to increase from 15 to 20 employees.



Scale: 1" = 6.3 Miles

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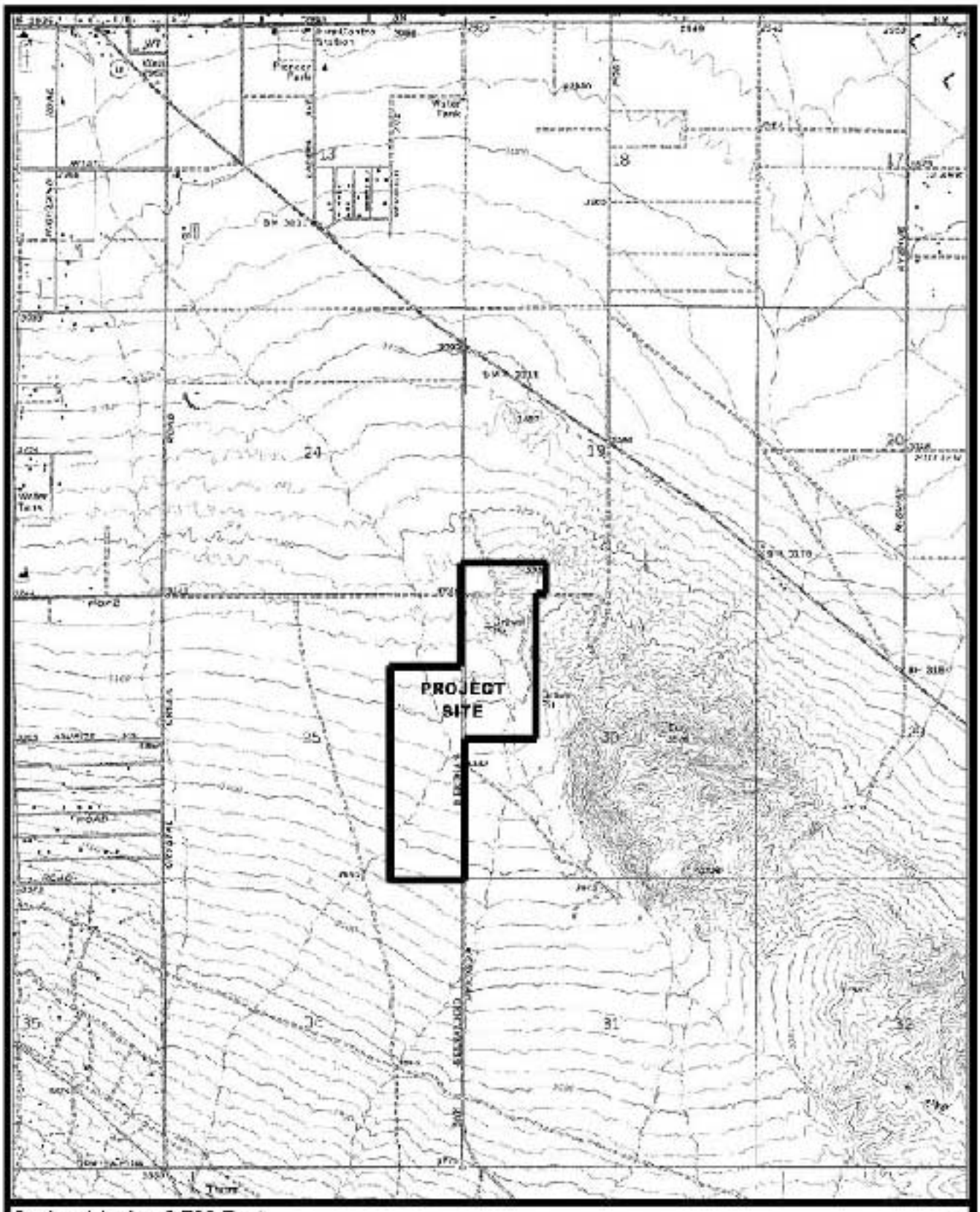
VICINITY MAP

HI-GRADE MATERIALS - LUCERNE VALLEY PIT

● Project Site

Figure 1



Scale: 1 Inch = 2,700 Feet

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EXTENT OF HOLDINGS / LOCATION MAP

HI-GRADE MATERIALS – LUCERNE VALLEY PIT

Map Source: USGS 7.5 Lucerne Valley, CA Quadrangle

Figure 2

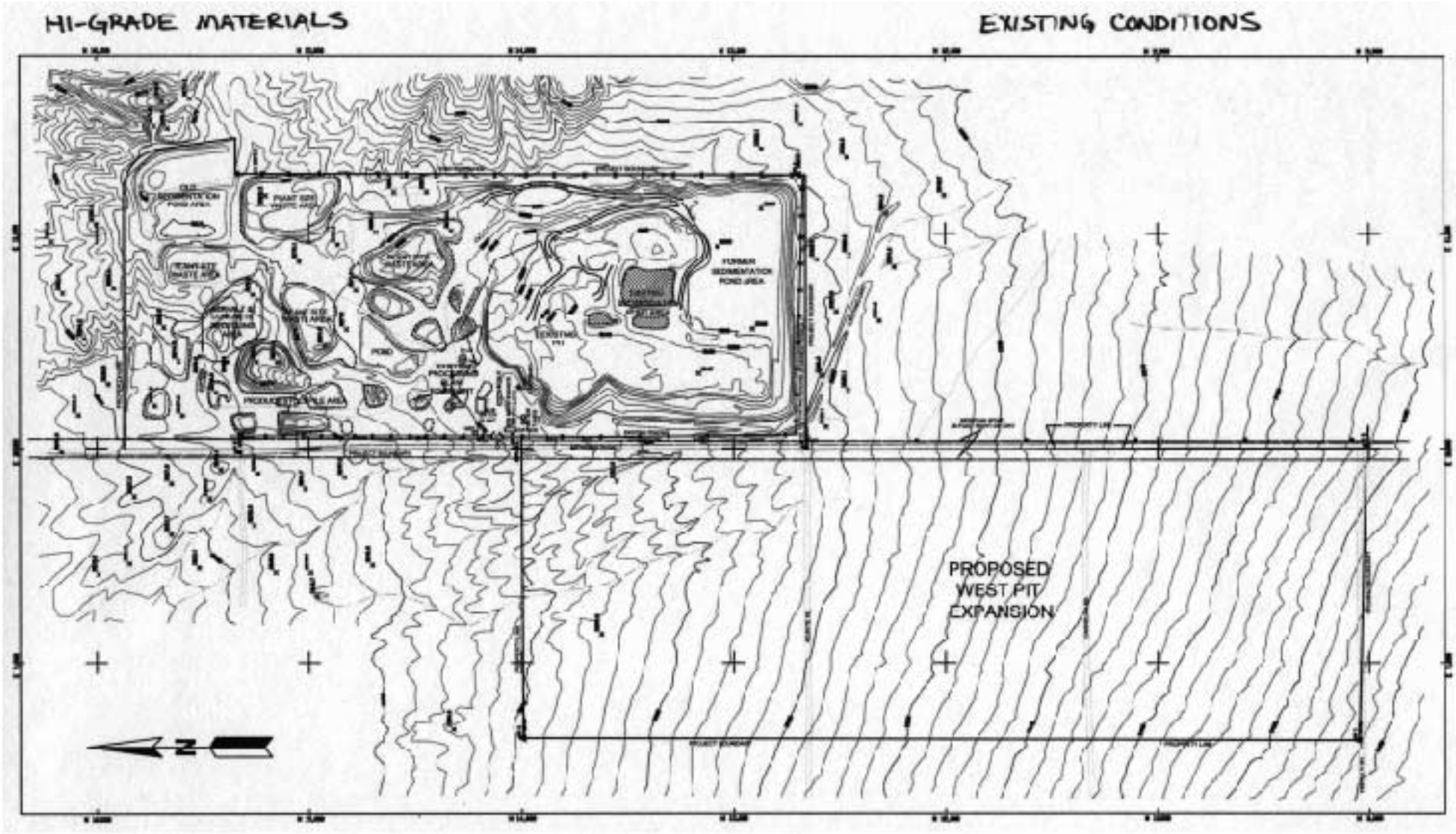
HI-GRADE MATERIALS
EXISTING CONDITIONS
PROPOSED
WEST PIT
EXPANSION
N

Figure 3

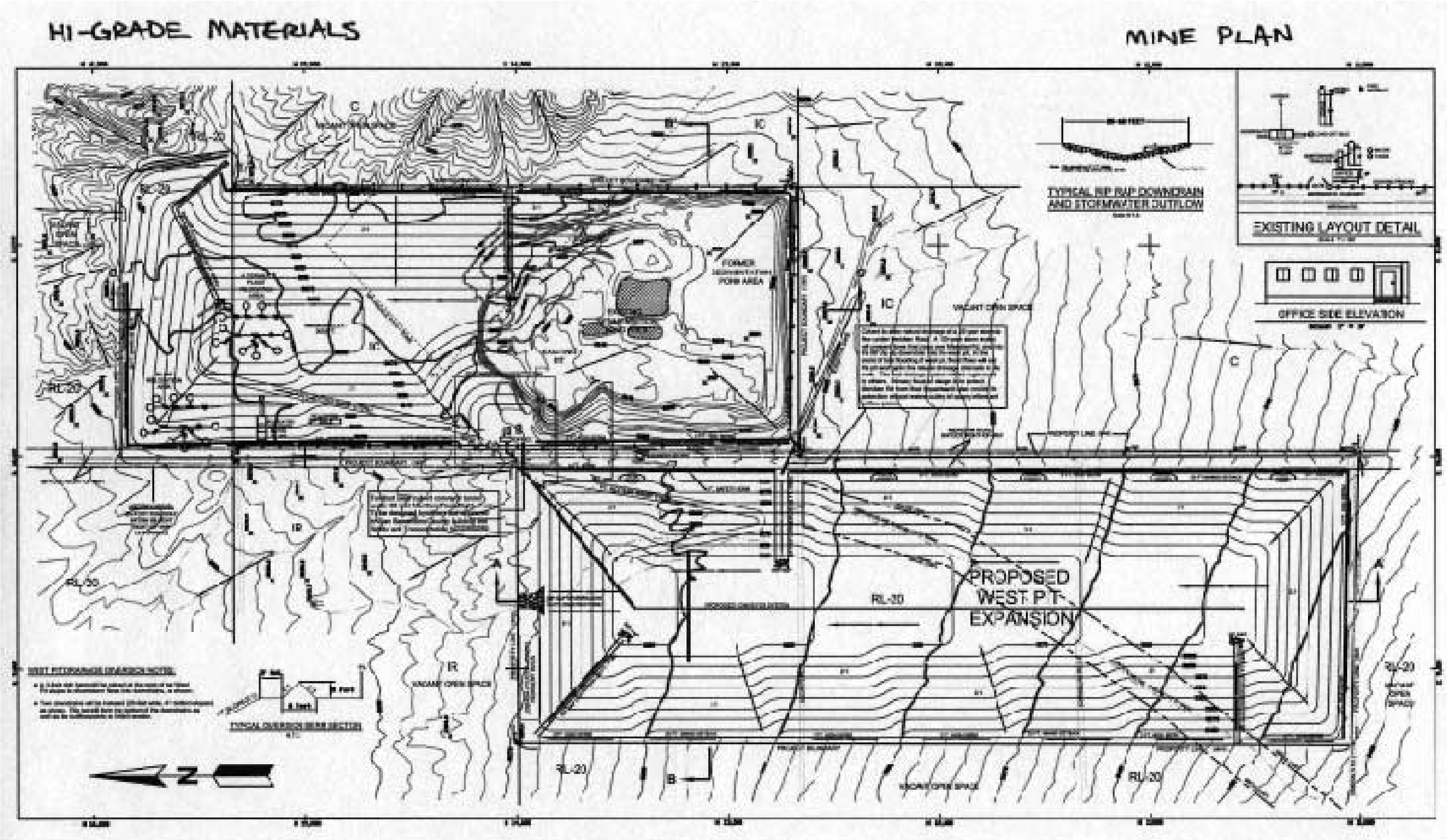
HI-GRADE MATERIALS
MINE PLAN
TYPICAL RIP RAP DOWNDRAIN
AND STORMWATER OUTFLOW
EXISTING LAYOUT DETAIL
OFFICE SIDE ELEVATION
FORMER
POND AREA
VACANT OPEN SPACE
PROPOSED
WEST PIT
EXPANSION
RL-20
TYPICAL DIVERSION BERM SECTION
WEST PIT DRAINAGE DIVERSION NOTES:

Figure 4

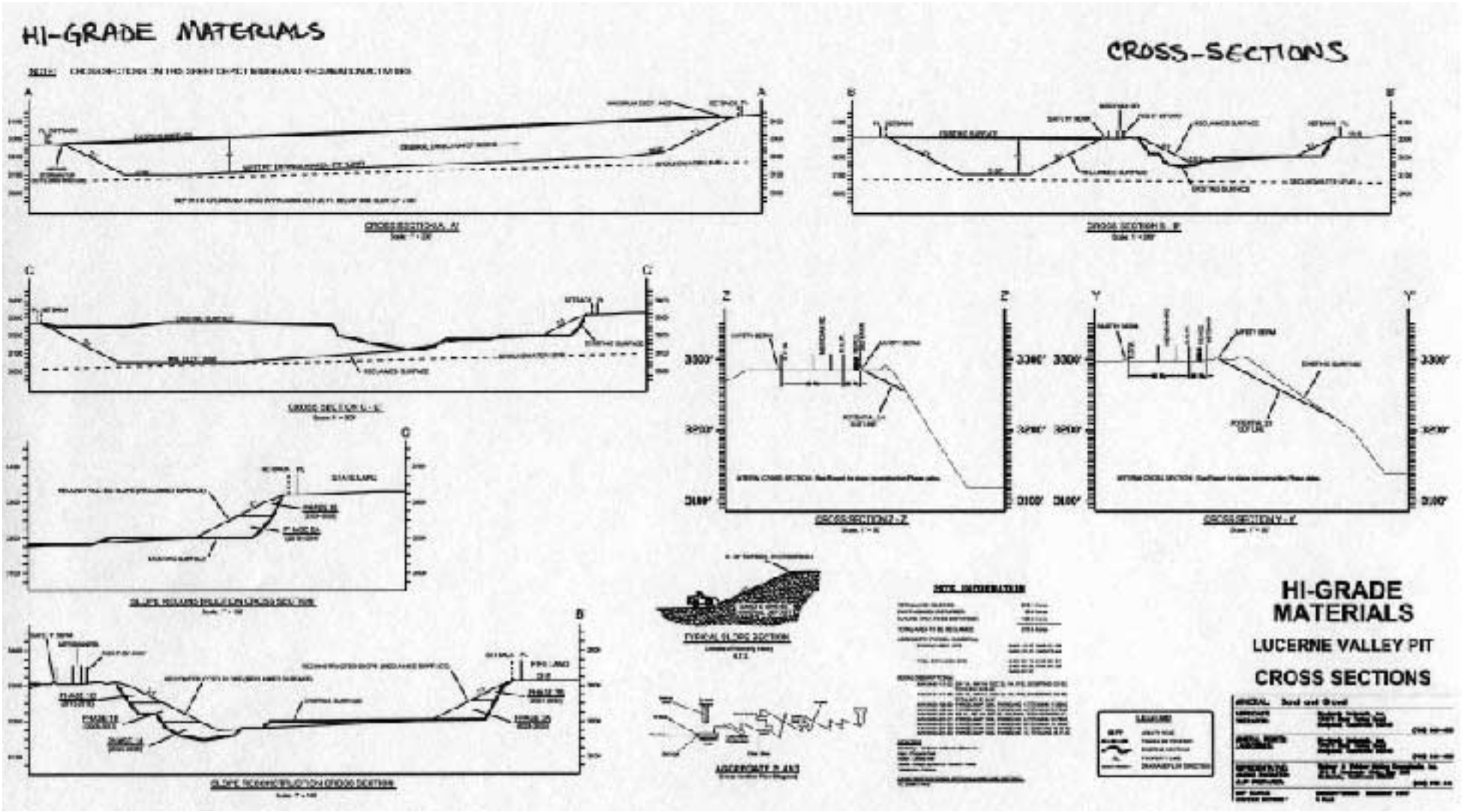
HI-GRADE MATERIALS
CROSS-SECTIONS
HI-GRADE MATERIALS
LUCERNE VALLEY PIT
CROSS SECTIONS

Figure 5

The proposal includes a reclamation plan over 210 acres and a revision to the existing reclamation financial assurance for the expanded site operations.

This proposal was originally advertised as including the vacation of segments of three (3) local roads (Azurite, Carnelian, and Emerald), but the project design has been revised to request the vacation of segments of two (2) roads. Emerald Road will remain and provide the southerly project boundary for the proposed west pit. New roads will be established along the westerly and northerly boundaries of the west pit to provide public access from Azurite and Carnelian Roads to Meridian Road.

The processing plant will remain in the east pit area through the site operations. As operations progress toward the north end of the east pit, the processing plant will be relocated within the east pit. Material mined in the west pit would be conveyed from the west pit to the processing plant via an underground conveyor that would tunnel beneath Meridian Road.

Mine Operations

The alluvial material found on site is processed into sand and gravel aggregates. Prior to mining, topsoil and vegetation will be salvaged and stockpiled for use in reclamation. Material is mined with a dozer and front-end loader, or with an excavator, and conveyed or hauled to the crushing/screening plant. No blasting is necessary to remove material. Material is crushed, screened, washed then stockpiled on site by product size. Material is also sent to the concrete batch plant. Fine waste materials, referred to as “fines”, are produced from sand-washing and from crushing/screening operations and are not generally used as an aggregate product. Processing and wash water is pumped to a multi-stage sedimentation pond system. Approximately 80 to 90 percent of the water is recovered and pumped back to the processing operations. Dewatered fines are stockpiled for use in slope stabilization and revegetation.

Facilities on site include the crushing/screening plant, concrete batch plant, truck scale, water production well, material stockpiles, and office. Days and hours of operation are proposed to remain as 24 hours per day, 7 days per week, depending on demand.

Periodically, asphalt and concrete are crushed/screened on site by a contractor and recycled into road base aggregate. The crushing process occurs approximately three to four times per year depending on material availability and market demand.

The water production well on site provides adequate supply for processing activities. Drinking water for employees is provided by bottled water. The future rate of water extraction is expected to be 215,000 gallons per day, or approximately 200 to 240 acre-feet annually. Approximately 80% of processing water is recycled via sedimentation ponds in the pit. Hi-Grade has a stipulated water right of 442 acre-feet per year from the Mojave Water Agency. This amount will be reduced (“ramped down”) to 354 acre-feet per year due to local groundwater basin conditions.

Reclamation

The planned end use of the site will be open space. The Revegetation Plan, a component of the Reclamation Plan (Figure 6), includes soil and plant salvage, seed collection, plant propagation, surface preparation, planting of seedlings and transplants, and a monitoring and weed control program. A nursery for plant transplants and propagation is proposed on the north end of the west pit area. Other reclamation activities include removal of equipment and structures, installation of final drainage and erosion control devices, slope contouring, and scarification of pit bottoms to promote groundwater recharge and revegetation.

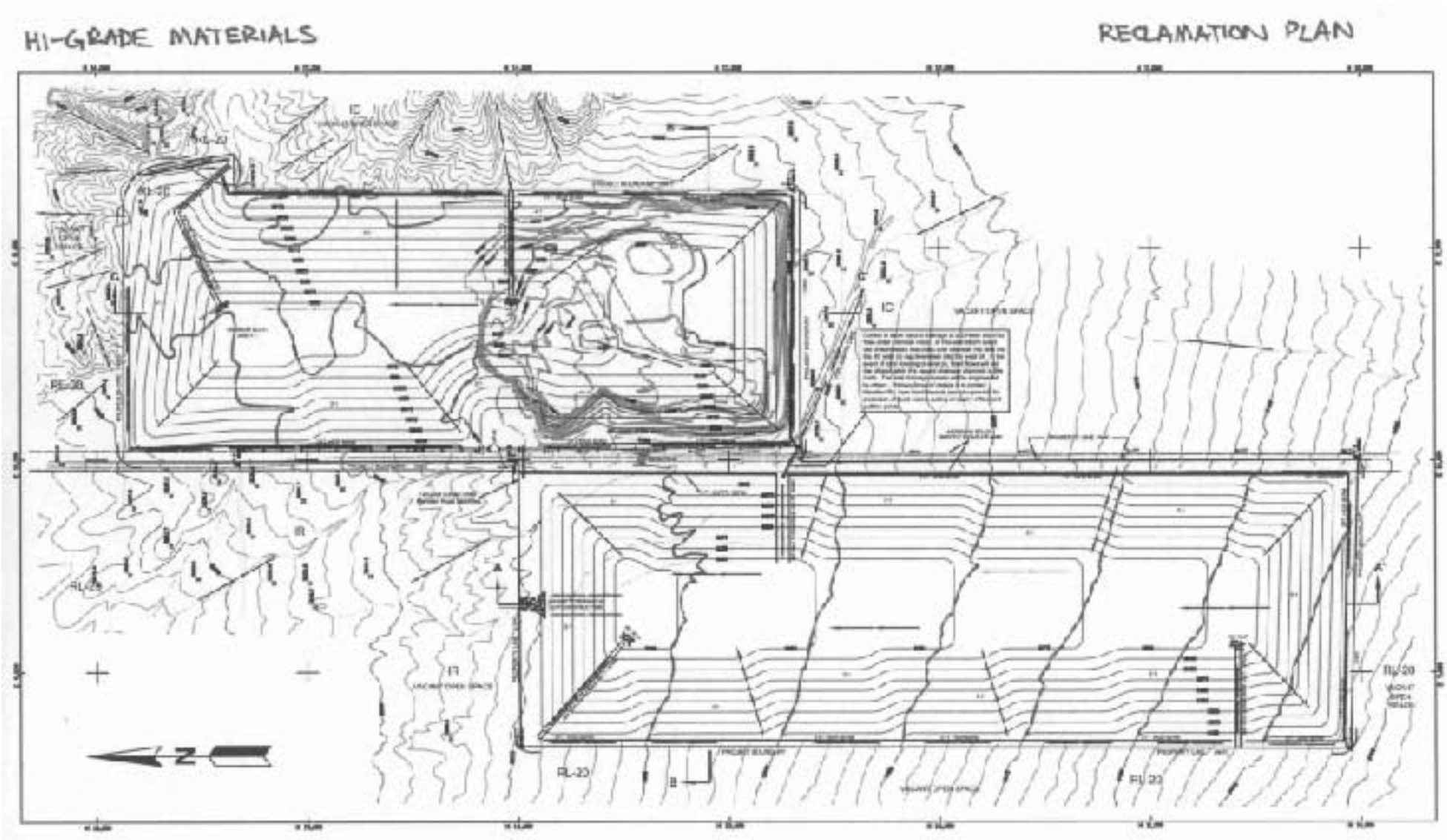

Figure 6

Existing Conditions

Site operations began in 1955. Topography over the site slopes down from the south to the north that ranges in elevation from 3,440 feet above sea level (asl) to 3,275 asl. The east pit bottom is approximately 3,150 feet asl in the deepest portion of the existing pit. An ephemeral "blueline" stream as shown on the USGS Quad map as running in a generally north-south direction through the proposed west pit. In addition to the land use districts shown below in the "Surrounding Land Uses" Table, portions of the site also are mapped within several General Plan Map overlays. The Helendale Fault, which is mapped by the state as an Alquist-Priolo Special Studies Zone, runs through the south wall of the existing east pit, trending in a northwesterly direction. The Fire Safety overlay has been applied to the sourtherly ½ of the existing pit, and to the northerly portion of the proposed west pit. Finally, a Mineral Resource Zone (MRZ) category of MRZ-2a has been applied by the state to the existing pit, signifying that the area contains significant mineral resources. The proposed west pit is designated as MRZ-2b, as an area where significant resources are expected to be found, based upon available geologic information.

Site and Surrounding Land Uses:

The existing east pit is designated as Community Industrial (IC). The land uses in this portion of Lucerne Valley primarily consist of this mine plus limestone mining operations (quarries and plants) to the south, an idle aggregate mine site due south, scattered residences to the south (2 miles) and west (1/4 mile), vacant lands to the east and residences approximately 1.5 miles to the northeast in a small housing tract on the north side of SH 18. The proposed west pit is designated Rural Living with a minimum parcel size of 20 acres (RL-20). The area is in Improvement Level 4, which requires limited rural infrastructure.

	EXISTING LAND USE	OFFICIAL LAND USE DISTRICT	IMPROVEMENT LEVEL
East Pit	Hi-Grade Materials Co. operations	Community Industrial (IC)	4
New West Pit	Vacant	Rural Living - minimum parcel size of 20 acres (RL-20)	4
North	Vacant	RL-20, Regional Industrial (IR)	4
South	Vacant	RL-20, Resource Conservation (RC)	4
East	Vacant	RL-20, IC, RC	4
West	Single Family Residence & Vacant land	RL-20	4

Vegetation in the expansion areas is sparse and includes a common ecotonal mixture of Joshua Tree Woodland/Blackbush/Mojavean Creosote Bush Scrub, as described in the Biological Resource Baseline Survey conducted in 1998 (updated in June 2001) and the Revegetation Plan for 120-acre Quarry Expansion Area, dated January 2004. Creosote bush, burrobush, California buckwheat and cheesebush are the main plant species in the expansion areas. Scattered Joshua Trees and Mojave yuccas are present onsite. A total of 95 plant taxa were identified on site. No sensitive plant species designated by the California Native Plant Society (CNPS) or the U.S. Fish and Wildlife Service were identified. The County's Desert Native Plant Protection ordinance also covers all yuccas and Joshua Trees, as well as cactus over two (2) inches in diameter.

Nineteen vertebrate species were noted to occur on, or flying over, the proposed expansion areas. These included only common birds, mammals and reptiles. The only documented desert tortoise evidence was

located in the northern 1/3 of the expansion area, where a burrow was found that was determined to be several years old. No other tortoise signs (i.e. scats, burrows, pallets, tracks, egg shells, etc.) were observed. No evidence of Mohave ground squirrels was found on or near the site. Disturbance at the project consists of the 90- acre site on the east side of Meridian Road. On the west, the disturbance is primarily two existing dirt, non-County maintained roads (Azurite and Carnelian).

Permit Status

The site has had a Mine Reclamation Plan in place since 1981. Reclamation Plan 81M-05 expired in March 2001 and the site has been operated under a TUP since that date. In 1999, Hi-Grade Materials Co. expanded the existing pit, without proper permitting, by approximately 10 acres to the north onto property also owned by Hi-Grade Materials Co. The annual inspection cited this violation and required Hi-Grade to submit an application to revise their Conditional Use Permit and Mine Reclamation Plan. Overly steep slopes along the west side of the pit were also cited as not in compliance with the permit. The application was submitted in 1999 but did not include the necessary geotechnical reports.

Mining during the TUP is limited to only those areas where 2:1 (h:v) slopes could be constructed. The existing cut slope on the west side of the pit presents a potentially unstable situation for the County maintained Meridian Road. As mining operations expand, all new cut slopes will be mined no steeper than 2:1. In the spring of 2004, the upper 40 feet along Meridian was cut to a 2:1 slope. Work will begin in early August 2004 to move silt basins to the north and spread old silt basin materials to flatten pit bottom in preparation to build 2:1 slopes along the west, south and east slopes. Initially, slopes will be stabilized with fill sand that is stockpiled at site. Mining is proceeding around the plant site to the north and east.

This application includes a Conditional Use Permit for expanded operations in the east pit and new west pit, a Mine Reclamation Plan over the entire 210 acres that would be affected, and a revised Financial Assurance to cover the costs of reclamation over disturbed areas.

Other Agencies

Other public agencies whose approval is/may be required (e.g., permits, financing approval, or participation agreement.):

- California Department of Conservation, Office of Mine Reclamation: Approval of Mine Reclamation Plan and Financial Assurance.
- Mojave Desert Air Quality Management District: Permits to Operate, Permits to Construct, Fugitive Dust Control Plan.
- U.S. Army Corps of Engineers: 404 Permit
- Lahontan Regional Water Quality Control Board: NPDES Storm Water Discharge permit, 401 Certification, Waste Discharge Requirements.
- USFWS: Incidental Take Permit.
- CDFG: 1601 Streambed Alteration Agreement.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use/ Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Melinda Wright — August 10, 2004
Signature (prepared by) — Date

Randy Scott — August 10, 2004
Signature — Date
For Director, Land Use Services Department

EVALUATION OF ENVIRONMENTAL IMPACTS

Pursuant to Section 15063 of CEQA Guidelines, an explanation is required for all "Potentially Significant Impact," 'Potentially Significant Impact Unless Mitigation Incorporated," and "Less Than Significant Impact" answers, including a discussion of ways to mitigate the significant effects identified.

I. AESTHETICS — Would the project:

a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

SUBSTANTIATION (check X if project is located within the viewshed of any Scenic Route (Highway 18) listed in the General Plan):

The proposed project is an expansion of open pit mining below the north slope of the San Bernardino Mountains on both sides of a portion of Meridian Road. The existing mined area has been in operation since 1955. The proposed expansion will create an increase in the area of the quarry, most of which would not be visible from Lucerne Valley and travelers on State Highway 18 because of topography. The highest structure on the site is the cement tower at approximately 60 feet.

a) The project's processing plant and stockpiles will be visible from State Route 18 which is designated as a Scenic Route. Views are buffered by a prominent ridgeline that trends from northwest to southeast, located east and north of the existing pit. Stockpile heights should be limited to minimize the disruption of traveler's views along State Route 18 to the south towards the north slope of the San Bernardino Mountains. The overall height of the existing equipment in the processing area does not exceed 75**'** from grade, as restricted by the IC Land Use District. Mitigation will be included to limit height of structures and stockpiles.

b) There are no unique scenic resources such as historic structures, rock outcroppings or groves of trees present on the west expansion area; therefore, the impact to scenic resources will be less than significant.

c) The expansion areas total 130 acres, of which 120 have not been disturbed by mining. Expanded operations will result in significant change to the existing character of the site; however, the excavation will not block future scenic views with stockpile and structure height limitations, as well as a vegetated berm for screening.

d) Night time operations have been permitted in the east pit, although they are not currently permitted under the TUP. Future night time operations will be permitted in the east pit, and may be permitted subject to a

noise analysis, in the west pit. Existing operations will be required to upgrade lighting when any new or replacement fixtures are installed.

MITIGATION:

1. **Plant equipment and structures shall remain in the east pit area.**
2. **Stockpiles which are at or above natural grade level are restricted to a maximum height of 45 feet in the east pit area, and 35 feet in the west pit area, due to the RL-20 Land Use District.**
3. **Plant equipment and structures are restricted to a maximum of 75 feet in height above natural grade level.**
4. **Prior to the start of operations in the west pit, a vegetated berm shall be constructed along the west side of the pit for noise and aesthetic purposes.**
5. **Any new lighting or replacement of lighting fixtures shall incorporate shielded lights directed downward at the work area.**
6. **No light may spill over onto residential properties.**
7. **All light fixtures installed on-site shall have a solid back and light fins to allow concentration of light rays on work areas only, avoiding 360 degree lighting which produces bright halo effects. Lighting shall be consistent with the Night Sky ordinance provisions of County Development Code Section 87.0921.**
8. **Light fixtures shall not be directed to where emitted light could disturb local residences.**
9. **Only areas operational during nighttime hours shall be illuminated; all unneeded lighting shall be shut down or reduced as feasible.**

SIGNIFICANCE AFTER MITIGATION:

Implementation of the above mitigation measures will reduce the potential impact to Aesthetics to less than significant.

II. AGRICULTURAL RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	Impact
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

SUBSTANTIATION (check _ if project is located in the Important Farmlands Overlay):

a-c) The site is located on the northern slopes of the San Bernardino Mountains, where both the topography and the soil generally restrict the viability of agriculture. The project will not conflict with agricultural zoning nor result in loss of farmland. The site is not designated as "Prime Farmland, Unique Farmland or Farmland of Statewide Importance." The expansion areas are not used for agricultural purposes.

MITIGATION:

No mitigation is required.

III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION (discuss conformity with the Mojave Desert Air Quality Management Plan, if applicable):

Mining operations will not be conducted on all 210 acres at one time. Fugitive dust and equipment emissions from operations will contribute to air quality impacts. Standard mining mitigation measures will be included to water roads and areas being excated, and to halt operations during sustained high winds. Operations shall comply with the Air Quality Management Plan required of the project.

a) The project has the potential to conflict with attainment of the Mojave Desert Air Quality Management District's (MDAQMD) Federal Particulate Matter (PM_{10}) Attainment Plan due to the potential generation of fugitive dust by material handling and hauling. However, the operator has and must maintain an approved Air Quality Management Plan with the MDAQMD. The Plan shall be updated to include expanded operations.

b, c) The proposed project is in an area designated as being in moderate non-compliance with federal PM_{10} air quality standards. As stated in AQMD Rule 403, compliance with the control and contingency measures listed in the Rule is presumed to reduce air quality impacts from fugitive dust (PM_{10}) to a level which meets federal PM_{10} standards and improves ambient air quality. Those measures are listed below and will be required of the project. There is inadequate data at this time to evaluate if the project would potentially violate air quality standards. To evaluate potential impacts, an air quality analysis is required that is to include mobile emissions. Following review of this submitted data a final determination will be made regarding the significance levels.

d) The nearest sensitive receptor is an occupied residence located less than one quarter mile west of the project site. If dust migrates off site toward the sensitive receptors, that would be considered a significant impact. The air quality analysis will identify mitigation for dust control and emissions that shall mitigate this potential impact.

e) The proposed project will not produce any significant amount of objectionable odors.

MITIGATION:

10. **To further evaluate potential impacts, an air quality analysis is required that is to include mobile emissions.**
11. **The project will provide an updated Air Quality Management Plan for review and approval by the Mojave Desert Air Quality Management District (MDAQMD). The operator will be required to operate with the parameters of the plan, once approved.**
12. **All plant processing equipment shall have current permits as required by the MDAQMD.**
13. **Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. Use of a water truck to maintain most disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance. Disturbed surfaces that are subject to fugitive dust emissions will be watered at least twice per day to stabilize the surface.**
14. **Take action sufficient to prevent project-related trackout onto paved surfaces and wet sweep as needed. Clean up spills on publicly maintained road surfaces immediately.**
15. **Cover loaded haul vehicles while operating on publicly maintained paved surfaces.**
16. **Stabilize graded site surfaces when subsequent development is delayed or expected to be delayed for more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions.**
17. **Apply water or soil stabilizer during earthmoving and on material stockpiles to prevent visible dust emissions from leaving property boundaries.**
18. **Reduce non-essential earth-moving activity under high wind conditions in excess of 25 miles per hour. A reduction in earth moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.**

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	

19. Cease earthmoving operations during sustained winds in excess of 30 miles per hour.

20. Permittee shall comply with all applicable MDAQMD rules and regulations, including but not limited to, New Source Review Regulations, Standards of Performance for Asphaltic Concrete and Mineral Processing Plants, Rule 403 for fugitive dust, and PM_{10} requirements.

21. Traffic speeds on all unpaved haul and access roads shall be restricted to 25 m.p.h.

22. All open storage piles susceptable to wind erosion shall be watered daily or shall be installed with temporary coverings to control PM_{10} emissions.

23. Construction equipment and truck engines shall be tuned to manufacturers specifications to ensure proper function.

24. The operator shall schedule production activities to minimize daily equipment operations and idling trucks.

25. The operator shall comply with all existing and future CARB and MDAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

SIGNIFICANCE AFTER MITIGATION:

Implementation of the above mitigation measures will reduce the potential impact to Air Quality to less than significant.

IV. BIOLOGICAL RESOURCES — Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

SUBSTANTIATION (check if project is located in the Biological Resources Overlay _X_ or contains habitat for any species listed in the California Natural Diversity Database __):

a,e,f) The lands proposed for the west pit and east pit expansion support an ecotonal mixture of Joshua Tree Woodland/Blackbrush/Mojavean Creosote Bush Scrub. There were ninety-five plant taxa identified during the course of the field surveys and nineteen vertebrates including five reptiles, ten birds and four mammal species. Three surveys have been conducted to support this application.

Wildlife species observed on the project site and adjacent areas are common to the Mojave Desert and surrounding desert-mountain transition areas. The only documented desert tortoise evidence was located in the northern 1/3 of the expansion area, where a burrow was found that was determined to be several years old. No other tortoise signs (i.e. scats, burrows, pallets, tracks, egg shells, etc.) were observed. No evidence of Mohave ground squirrels was found on or near the site. The tortoise is Federally and State of California listed as a threatened species. No other tortoise sign were observed during the survey. The approval of the expansion areas on the east and west would allow for up to 10 acres/120 acres, respectively, of vegetation to be removed. The plant communities noted are common throughout the area and are not representative of restrictive or sensitive communities. Although the loss will contribute to the impacts to these communities, occurring along the northern base of the San Bernardino Mountains, the required reclamation with attendant revegetation of the project will reduce the overall impact of the loss. Scattered Joshua Trees and Mojave yuccas are present onsite. The County's Desert Native Plant Protection ordinance has restrictions on removal and transplant for all yuccas and Joshua Trees, as well as cactus over two (2) inches in diameter. These restrictions are reflected in the Revegetation Plan, which includes requirements for a nursery, as well as transplant and propagation methods.

Once mining is complete, reclamation activities will include final contouring of the slopes and ripping and recontouring of the floor, followed by revegetation effort using an approved seed mixture, based upon native seed mix existing in the area. The soil islands concept as developed by the National Park Service will be employed. The revegetation plan utilizes these species as well as more commonly occurring species to reestablish a self-sustaining native plant community on disturbed areas.

b) There is no riparian habitat located on the project site to be disturbed.

c) There are no wetlands as defined by Section 404 on the project site.

d) There will be no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, as the Revegetation Plan is in compliance with the specifications of the County plant preservation ordinance.

MITIGATION:

26. The Revegetation Plan shall be implemented immediately upon CUP approval. The applicant will salvage and tranplant desert native plants on the project site in accordance with the approved revegetation plan.

27. Prior to ground disturbance, tortoise exclusionary fencing shall be installed around the perimeter of the proposed mining site including the plant and access road. A qualified tortoise monitor shall be present during fence installation and construction.

28. A pre-clearance survey shall be conducted within the fenced area to determine presence or absence of the desert tortoise. If desert tortoise are found on-site, tortoise relocation shall be performed by a qualified biologist.

29. Prior to handling any desert tortoises, the applicant shall consult with the CDFG and USFWS to obtain a 10a and 2081 permits or provide evidence that they are not required.

30. Prior to the start of any mining activities, personnel associated with the operation shall be required to attend a desert tortoise preservation awareness seminar. The awareness program shall be provided to all new employees and reviewed with all personnel quarterly.

31. Prior to disturbance in the area identified as a "blue-line stream", the applicant shall enter into a Streambed Alteration Agreement with CDFG.

SIGNIFICANCE AFTER MITIGATION:

After mitigation, the potential impacts to Biological Resources will be less than significant.

V. CULTURAL RESOURCES — Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

SUBSTANTIATION (check if the project is located in the Cultural X or Paleontologic X Resources overlays or cite results of cultural resource review):

a-b) Based upon available information, the potential for the presence of historical resources within the project area is Moderate to High for Prehistoric and Historic Archaeological Resources and High for Historic Resources, and a survey shall be required prior to land disturbance.

c) Paleontologic resources may exist within the fossiliferous Old Woman Sandstone that exists beneath the new west pit area. This rock unit has been assigned a high paleontologic sensitivity by the San

Bernardino County Museum. In areas not yet excavated, a program to mitigate impacts to these resources shall be developed.

d) No human remains are believed to exist in the project vicinity; however, if any are found, state law requires that the Coroner's Office be contacted immediately prior to further activity in the area. If human remains are encountered on the property, then the San Bernardino County Coroner's Office must be contacted within 24 hours of the find, and all work halted until a clearance is given by that office and any other involved agencies.

MITIGATION:

32. An archaeological survey by a qualified archaeologist is required to be submitted for review and approval prior to new land disturbance in the expansion areas of both the east and west pits.

33. Submit a historical resources management report to document the survey, any subsurface testing, to document archival research, to evaluate resource significance and integrity and, if necessary, to evaluate project impacts and propose further mitigation measures to mitigate potential adverse impacts in accordance with the appropriate laws.

34. A portion of the project site is located within an area of known fossil occurrences on the paleontological resources overlay. A paleontological resource-monitoring plan shall be developed by a County approved vertebrate paleontologist, and approved by the San Bernardino County Museum prior to excavation.

35. If fossil remains are uncovered during mining, then excavations in the vicinity shall be stopped and a County approved paleontologist shall be called to remove the specimens and if warranted, additional recovery activities will be conducted.

SIGNIFICANCE AFTER MITIGATION:

Implementation of the above mitigation measures will reduce the potential impact to Cultural and Paleontological Resources to less than significant.

VI. GEOLOGY AND SOILS — Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18 1-B of the California Building Code (2001), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

SUBSTANTIATION (check X if project is located in the Geologic Hazards Overlay District):

a, c) The east pit is partially bisected by an active trace of the Helendale fault. The number of people in the pit at any time is limited to a few equipment operators. There is the possibility of ground rupture in the mid point of the east pit, but any movement of the fault should only result in localized, surficial slope failure. The limited number of people exposed place the risk from seismic hazards at less than significant levels. In the existing pit, over-excavation has occurred in which the pit has been developed too close to the property lines for the steepness and height of the slopes. The most pronounced area of over-steepened slopes is the southwest corner which lies adjacent to Meridian Road. A remediation design to establish slope stability in the east pit slopes was prepared by CHJ, Inc. and is incorporated into the mitigation measures for this project. Due to safety concerns, stabilization of slopes along Meridian Road will be conducted first. This will be accomplished by using plant sand washing waste slurry to buttress the slopes.

b) The project site is susceptible to erosion, as the mine will expose alluvial materials in an excavated pit. Disturbed areas will be stabilized to minimize both short and long-term erosion and sediment loss. Growth media stockpiles will be stabilized through establishment of a temporary vegetative cover if they are designed for storage periods exceeding one year. Berms will be constructed along the south boundaries to control surface flow. Down drains and rip rap pads will be installed to channel flows into the pit and prevent erosion of the pit walls.

Long-term stabilization, or reclamation, will generally involve grading or reshaping disturbed areas, establishing effective drainage, placement of plant growth media, and revegetation. Following reclamation, the majority of surface runoff from quarry areas will be retained within the quarry limits where it will either infiltrate or evaporate.

d) The project is not located on expansive soils. Gravelly sands and sandy soils comprise the 300 to 500 feet deep layer of alluvium on site.

e) The project will not require additional sewers or septic tanks. Portable sanitary facilities are adequate to meet current and projected demand and are maintained regularly.

The proposed mining and reclamation of the site is designed to minimize any safety concerns related to geological hazards.

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact

MITIGATION:

36. The slopes of the east pit shall be remediated to bring them to an overall slope of 2:1. The slopes shall be reconstructed using the slurry and levee buttress fill method discussed in the December 26, 2002 CHJ report.

37. A slope stability testing program shall be established and employ methods and schedule as recommended in CHJ report dated August 18, 2003, and as approved by the County Geologist. This will include submittal of a fill slope construction and stability report at least every 50 vertical feet of slope or annually whichever occurs first.

38. Failure of any slope during construction will require a reevaluation of slope stability and a reevaluation of the fill placement method. The reevaluation shall include a written report that discusses the cause of the failure and presents recommendations for mitigation. The report shall be reviewed and approved by the County Geologist.

39. Maximum mined slopes shall not exceed 2:1, in accordance with the CHJ report dated December 9, 2002.

40. Berms or levees are required on both the east and west pit to control surface runoff from south of the project. Safety berms shall be placed at the top of slope above all working areas.

41. Following final reclamation of both the east and west pit, a final report prepared by the Project Geologist shall be submitted to verify the stability of finished slopes.

42. Should the Helendale fault rupture through the project, the stability of slopes shall be reevaluated by the Project Geologist prior to further operations near the ruptured area.

43. Recommendations of the approved CHJ Slope Stability Investigations shall be adhered to throughout the life of the project, as approved by the County Geologist.

SIGNIFICANCE AFTER MITIGATION:

The incorporation of the above mitigation measures will reduce the potential impact to Geology and Soils to less than significant.

VII. HAZARDS AND HAZARDOUS MATERIALS —
Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

SUBSTANTIATION:

a-d) The project involves the use of materials common to the mining industry, such as fuels and lubricants, the use of which are sufficiently controlled by existing regulations. The existing Business Emergency Contingency Plan provides information such as emergency contact persons and numbers, the types of hazardous materials stored on-site, the correct emergency responders to contact for specific emergencies, and evacuation procedures and routes to use during an emergency event. No blasting or explosives will be used. There is less than significant risk of exposure onsite or off. The site is not included on the list of hazardous materials sites. The closest school is more than 2.5 miles away and the closest airport is in Big Bear City (approx. 8 miles).

e-f) No impact. The site is not in a public, or private, airport land use area.

g) As a part of this proposal, portions of two public non-maintained roads (Azurite and Carnelian) are proposed to be vacated between Meridian Rd and approximately ¼ mile to the west. Emergency evacuations of residences to the west of the expansion would still be able to exit in a westerly direction and access Meridian Road via the public road to be developed around the pit boundary.

h) The project will not expose people or structures to significant risk from wildfire, as vegetation is removed as a precursor to further development of the mine pit.

MITIGATION:

No mitigation required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	
VIII. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

SUBSTANTIATION:

a) The project will not result in any outflow that could violate water quality standards or waste discharge requirements because all water which could accumulate in the pit or processing area will percolate.

b) Water will be supplied as needed by a private well on site, as is currently in use for present operations. The existing Mojave Water Agency ajudicated pumping entitlement of 442 to 354 acre-feet per year will not be exceeded by this project's average usage of 240 to 250 acre-feet per year.

c-d) Runoff resulting from direct precipitation on active and unreclaimed disturbed areas and uncontrolled runoff from upgradient undisturbed areas has the potential to cause erosion and resulting sediment loss, transport, and deposition, in both the disturbed and downgradient areas. In active pit areas, drainage control is generally not a significant concern since essentially all disturbed area drainage is retained within the basin created by the quarry excavation.

Control of surface drainage, erosion, and sedimentation of existing and proposed operations is part of the project design and involves the following primary components:

- Limiting surface disturbance to the minimum area required for active operations.
- Diverting runoff into the pits into appropriate detention areas via downdrains.
- Using ditches, sediment basins, and localized control and maintenance measures to intercept and control disturbed area drainage.
- Stabilizing disturbance areas through regrading, revegetation, and other restoration practices.

County Land Development has required an updated Drainage Study for review and approval. Recommendations from that study may be made conditions of the project.

Sediment loss and transport will be controlled through the use of localized drainage and sediment control measures. These measures will include construction of temporary diversion and collection ditches, berms, check dams or catchment basins; placement of erosion control materials, sediment fences, or straw bales; and other appropriate measures individually or in combination.

The objective of all drainage control measures will be to limit flow volumes and velocities to minimize or prevent erosion and to promote settling of suspended solids before the runoff leaves the disturbed area. It is anticipated that drainage control measures will be implemented as needed based on regular inspection of operating areas by the operator and this will be an ongoing SMARA inspection item of interest during the scheduled annual inspections. If initial evidence of any significant erosion or siltation is observed down gradient of any disturbed area, appropriate control measures will be identified and implemented in a timely basis.

e-f) The project may affect drainage capacity offsite or contribute to degraded water quality because offsite flows will be directed into the west pit in accordance with accepted engineering methods. Water that enters the pits will generally be retained onsite and will percolate there, except for storm events that may occur before the west pit is deep enough to provide adequate storage capacity. An updated, complete drainage study will be required and mitigation measures may be incorporated from those recommendations. The depth to groundwater is expected to be at least 20 feet below the bottom of the final excavated pits. According to CHJ report dated April 5, 2001 this provides sufficient separation between the groundwater table and the bottom of the pit.

g-h) No Impact. The project is not located within a 100-year flood plain.

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact

i-j) No Impact. The project does not involve the building of dams or levees nor is it near any such structure. There will be no impounding of water that could result in seiche waves and the site is not exposed to tsunamis or debris flows.

MITIGATION:

44. The operator shall construct adequate measures upgradient of the project to control surface runoff in a manner commensurate with standard engineering practice. Measures will include, but not be limited to:

45. Limiting surface disturbance to the minimum area required for active operations.

46. Diverting runoff into the west pit into appropriate detention areas via downdrains.

47. Using ditches, sediment basins, and localized control and maintenance measures to intercept and control disturbed area drainage.

48. Stabilizing disturbance areas through regrading, revegetation, and other restoration practices.

49. Pumping of onsite water will remain within the parameters of the adjudicated basin rights, as outlined in the Mojave Basin Water Adjudication.

50. At the discretion of the County, recommendations from the required Drainage Study may be made project requirements.

51. Operations shall not be conducted within 20 feet of groundwater. No operations shall be conducted in standing water.

SIGNIFICANCE AFTER MITIGATION:

The incorporation of the above mitigation measures will reduce the potential impacts to Hydrology and Water Quality to less than significant.

IX. LAND USE AND PLANNING — Would the project:

a) Physically divide an established community?	☐	☐	☒	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

SUBSTANTIATION:

a) The project would repermit the existing mine area and approve an expansion to the west side of Meridian Road. The land uses in this portion of Lucerne Valley primarily consist of this mine plus limestone mining operations (quarries and plants) to the south, an idle aggregate mine site due south, scattered residences to the south (2 miles) and west (1/4 mile), vacant lands to the east and residences

approximately 1.5 miles to the north in a small housing tract on the north side of SH 18 and ¾ mile to the northeast on the east side of the ridgeline. The project will not physically divide an established community. The vacation of segments of Azurite and Carnelian Roads will be compensated by the establishment of a new public road around the perimeter of the west pit property.

b) No Impact. The project is the repermitting of an existing mine in an area that has a long history of mining at this location. The project, including the proposed expansion to the west is consistent with the County Development Code and General Plan because mining of naturally occurring minerals is allowed in any Official Land Use District (zoning) subject to a Conditional Use Permit (CUP). The CUP addresses environmental and operational issues which have the potential to impact the immediate environs.

c) No Impact. The project does not conflict with habitat plans or natural community conservation plans because none exist for this particular area.

MITIGATION:

None is required.

X. MINERAL RESOURCES — Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUBSTANTIATION (check X if project is located within the Mineral Resource Zone Overlay):

The east pit in in MRZ-2a and the west pit area is in MRZ-2b, as defined in Section I of this Initial Study. Excavating the aggregate resource will enable the beneficial use of the resource. Reclamation of the site will not preclude further development of the aggregate deposit should economically obtainable quantities still be available at the completion of the project.

a-b) The project is the productive use of a known mineral resource. There are no other known mineral resources that would be lost due to this project.

MITIGATION:

None is required.

XI. NOISE — Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION (check if the project is located in the Noise Hazard Overlay District ____ or is subject to severe noise levels according to the General Plan Noise Element __):

a-d) The proposed project will be a continuation of present operations at the site and a proposed expansion to the west. The closest residence is less than ¼ mile from the proposed expansion. Noise generated from the expansion is not expected to exceed standard County noise thresholds; however, a noise study shall be required immediately upon operations commencing in the west pit. Any necessary mitigation shall be accomplished within 30 days of commencement of operations in the west pit. The processing plant will remain on the east side of Meridian Road, although it may be relocated within the pit as operations progress. Noise generated at the project site will come from the processing plant and mobile equipment. The surrounding area to the west, north and south of the project currently has only two constructed residences, with two additional residences to the northeast. All four of these residences are at least 1/4 mile from the processing plant. Within the designated residential zoning of 20 acre minimum parcel size, the potential exists for as many as 20 residences within ¼ mile and 40 residences within ½ mile of the entire project site. This operation is required to conform to applicable noise control regulations and standards. A noise study conducted at the plant site in September 2001 found that noise emitted from the plant site should not exceed day or night standards for noise for residential areas, based on the testing 24 hour period, with the plant in operation. However, this study does not address noise from mobile equipment.

e-f) No Impact. There are no public or private airports in the vicinity.

MITIGATION:

52. A noise study shall be initiated immediately upon commencement of operations in the west pit.

53. Any necessary mitigation shall be accomplished within 30 days of commencement of operations in the west pit.

54. Noise level shall be maintained at or below County Standards, per Development Code Section 87.0905(b).

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	

55. Jake brakes shall not be used in residential areas.

SIGNIFICANCE AFTER MITIGATION:

The incorporation of the above mitigation measures will reduce the potential impact of Noise to less than significant.

XII. POPULATION AND HOUSING — Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION:

a-c) The project will not induce growth because it is the continuation of an existing operation with minimal increase in employees, from 15 to 20. There is no housing displaced by the mine expansion.

MITIGATION:

None is required.

XIII. PUBLIC SERVICES —

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	Impact
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☒	☐

SUBSTANTIATION:

a) Additional traffic will result from the increased production rate. With additional traffic, there may be a need for a minimal increase in fire and police services. An increase in public road maintenance may be needed, but is not expected to be significant. See also the Transportation/Traffic discussion in Section XV. In terms of schools and parks, no impact is expected, because the project will have only a minimal increase in employment levels, from 15 to 20 employees.

MITIGATION:

None is required.

XIV. RECREATION —

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION:

a-b) No impact. The project will not increase the use or demand for recreational facilities, nor does it include the construction or expansion of recreational facilities.

MITIGATION:

None is required.

XV. TRANSPORTATION/TRAFFIC — Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion				

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	
management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

SUBSTANTIATION:

a-b) The project will result in additional truck trips and employee trips on Meridian Road and Highway 18. A traffic study has been required by the County Transportation/Traffic Division to identify project-related traffic impacts, and determine any needed mitigation. Requirements levied as a result of the analysis from the submitted material will become project condition(s) of approval.

c) No Impact. This project will not have an impact on aviation related activities in the vicinity. The closest airport is approximately 8 miles south in Big Bear City.

d) The project may have an impact on the adjacent Meridian Road from future mining in the southwest corner of the existing pit. The operator will mitigate to the extent necessary to address possible encroachment into the existing SCE utility corridor and 44' half width road right of way for County maintained Meridian Road.

The project will include an expansion on the west side of Meridian Road which at full construction of the 120-acre pit would necessitate the vacation of two existing unpaved and non-County maintained roads (Azurite and Carnelian). An alternate public road will be provided around the west pit area perimeter. This will provide continued access to properties to the west.

The expansion pit to the west will utilize an engineered tunnel to allow the mined material in the west pit to be conveyed through the tunnel to the existing and future east side processing plant. Engineered plans and permits will be required prior to authorization to construct.

e) As a part of this proposal, portions of two non-maintained roads (Azurite and Carnelian) are proposed to be vacated between Meridian Rd and approximately 1/4 mile to the west. The provision of emergency services could be impacted in that an alternate route would be required for emergency vehicles responding to residential dwellings which lie west of the project. The route from Meridian Rd westward along either Azurite or Carnelian would entail a detour either around the pit on a road to be constructed on the project property or else the emergency vehicles would have to ingress from the west off of Crystal Creek Road, which could add a delay in their response time. The Lucerne Valley Fire Station lies mid way between Meridian Road and Crystal Creek Road, approximately 2 ½ miles north of the

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	No Impact

project site. Emergency vehicles can travel on either of two paved roads once they are south of State Highway 18. Meridian Road is unimproved between SH 247 and SH 18, but Crystal Creek Road is paved. Response time from the Fire Station to the closest residence to the west of the project (which is on Carnelian Road) is expected to be shortest from Crystal Creek Rd side, in view of the fact that Meridian Road is not paved for the first 1.5 miles from the fire station. This is expected to make a minimal impact on emergency services.

f,g) No Impact. Onsite parking requirements will be unchanged and are adequately addressed in the current plan. There will be no impacts to alternative transportation needs, and only 20 employees will be on site at any time, thus any alternative transportation programs would not be practical.

MITIGATION:

56. Mitigation for impacts identified through Traffic analysis of the project and submitted reports will be incorporated into the project conditions of approval, following review and approval of the study by County Traffic Division.

57. The proposed vacation of portions of Azurite and Carnelian Roads will be assessed by the County Transportation Highway Planning and Technical Committee, with their recommendation(s) being presented to the County Planning Commission, to be considered as part of the entire project.

58. Engineered plans and permit applications shall be submitted to the County Transportation Department and Land Development for review and approval of the proposed tunnel under Meridian Road.

SIGNIFICANCE AFTER MITIGATION:

Incorporation of the above mitigation measures will reduce potential impacts to Transportation/Traffic to less than significant.

XVI. UTILITIES AND SERVICE SYSTEMS —
Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

SUBSTANTIATION:

a,b,e,f) No Impact.The project will not require additional utility services as it is a continuation of ongoing mining activities onsite. There will be no wastewater requiring treatment as portable toilets are used.

c) As a result of the expansion of the existing pit and the construction of the proposed new pit west of Meridian Road, the operator will be required to construct onsite berming or diversion structures which directs surface flow into the project without impact to surrounding and downstream property owners. A revised and updated drainage study has been required for review and approval by Land Development prior to diversion of any flows. Downstream drainage easements may be required prior to any further land disturbance.

d) The operator has a single well onsite which currently supplies the water needs for aggreagate processing. The operator's existing entitlement under the Mojave Water Agency water adjudication agreement in place allows them sufficent pumping rights for their current and projected usage under this project. The ramp-down allowance under adjudication will be 354 acre feet/year with their planned usage in the 240 acre-feet per year range.

g) No Impact. The usage of local landfills will be that normally associated with projects which generate minimal waste product for normal disposal. Any potentially hazardous materials for disposal (oils/solvents/vehicle filters) shall be disposed of in accordance with the the project's approved Business Plan.

MITIGATION:

None is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE—

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of				

	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant Impact	
a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

SUBSTANTIATION:

a) The project has the potential to degrade the quality of the environment in the areas identified in the Sections of this Initial Study. Individual mitigation measures as enumerated below will be incorporated into the project and the impacts will then be mitigated below a level of significance. An air quality analysis is required to determine necessary mitigation. Mitigation is included for cultural and paleontological resources. Mitigation measures for biological resources include implementation of the revegetation plan, County desert native plant protection requirements, and requirements to avoid adverse affects to the desert tortoise including erecting exclusionary tortoise fencing, conducting clearance surveys before starting any mining related work, obtaining appropriate permits from CDFG and USFWS, training of on-site employees, and avoiding occupied tortoise habitat. The implementation of recommended mitigation would reduce impacts to threatened or sensitive species to less than significant levels.

b) With mitigation to reduce air quality impacts, the project will comply with MDAQMD requirements to the greatest extent possible, and will not have impacts that would be considered cumulatively considerable. To avoid cumulative impacts to air quality, mitigation for PM_{10} includes preparation of a dust control plan per MDAQMD requirements, compliance with all applicable MDAQMD rules and regulations, watering of roads and work areas, vehicle speed limitations, cessation of mining during high wind conditions, and dust control of stockpiles. Other mitigation includes keeping equipment and trucks tuned to manufacturers specifications, efficient scheduling to minimize daily equipment operations and idling trucks, and compliance with all CARB and MDAQMD regulations related to diesel-fueled trucks and equipment.

c) The project does have some potential to affect human beings through the potentially adverse impacts previously identified; however, the mitigation measures outlined below will mitigate all impacts below the level of significance. To evaluate potential impacts, a noise analysis and traffic analysis are required. Mitigation from these analyses will be required of the project.

XVIII. MITIGATION MEASURES

(Any mitigation measures which are not 'self-monitoring' shall have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval)

1. **Plant equipment and structures shall remain in the east pit area.**
2. **Stockpiles which are at or above natural grade level are restricted to a maximum height of 45 feet in the east pit area, and 35 feet in the west pit area, due to the RL-20 Land Use District.**
3. **Plant equipment and structures are restricted to a maximum of 75 feet in height above natural grade level.**
4. **A vegetated berm shall be constructed along the west side of the pit for noise and aesthetic purposes.**
5. **Any new lighting or replacement of lighting fixtures shall incorporate shielded lights directed downward at the work area.**
6. **No light may spill over onto residential properties.**
7. **All light fixtures installed on-site shall have a solid back and light fins to allow concentration of light rays on work areas only, avoiding 360 degree lighting which produces bright halo effects. Lighting shall be consistent with the Night Sky ordinance provisions of County Development Code Section 87.0921.**
8. **Light fixtures shall not be directed to where emitted light could disturb local residences.**
9. **Only areas operational during nighttime hours shall be illuminated; all unneeded lighting shall be shut down or reduced as feasible.**
10. **To further evaluate potential impacts, an air quality analysis is required that is to include mobile emissions.**
11. **The project will provide an updated Air Quality Management Plan for review and approval by the Mojave Desert Air Quality Management District (MDAQMD). The operator will be required to operate with the parameters of the plan, once approved.**
12. **All plant processing equipment shall have current permits as required by the MDAQMD.**
13. **Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. Use of a water truck to maintain most disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance. Disturbed surfaces that are subject to fugitive dust emissions will be watered at least twice per day to stabilize the surface.**
14. **Take action sufficient to prevent project-related trackout onto paved surfaces and wet sweep as needed. Clean up spills on publicly maintained road surfaces immediately.**
15. **Cover loaded haul vehicles while operating on publicly maintained paved surfaces.**
16. **Stabilize graded site surfaces when subsequent development is delayed or expected to be delayed for more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions.**
17. **Apply water or soil stabilizer during earthmoving and on material stockpiles to prevent visible dust emissions from leaving property boundaries.**
18. **Reduce non-essential earth-moving activity under high wind conditions in excess of 25 miles per hour. A reduction in earth moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.**

19. Cease earthmoving operations during sustained winds in excess of 30 miles per hour.

20. Permittee shall comply with all applicable MDAQMD rules and regulations, including but not limited to, New Source Review Regulations, Standards of Performance for Asphaltic Concrete and Mineral Processing Plants, Rule 403 for fugitive dust, and PM_{10} requirements.

21. Traffic speeds on all unpaved haul and access roads shall be restricted to 25 m.p.h.

22. All open storage piles susceptable to wind erosion shall be watered daily or shall be installed with temporary coverings to control PM_{10} emissions.

23. Construction equipment and truck engines shall be tuned to manufacturers specifications to ensure proper function.

24. The operator shall schedule production activities to minimize daily equipment operations and idling trucks.

25. The operator shall comply with all existing and future CARB and MDAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

26. The Revegetation Plan shall be implemented immediately upon CUP approval. The applicant will salvage and tranplant desert native plants on the project site in accordance with the approved revegetation plan.

27. Prior to ground disturbance, tortoise exclusionary fencing shall be installed around the perimeter of the proposed mining site including the plant and access road. A qualified tortoise monitor shall be present during fence installation and construction.

28. A pre-clearance survey shall be conducted within the fenced area to determine presence or absence of the desert tortoise. If desert tortoise are found on-site, tortoise relocation shall be performed by a qualified biologist.

29. Prior to handling any desert tortoises, the applicant shall consult with the CDFG and USFWS to obtain a 10a and 2081 permits or provide evidence that they are not required.

30. Prior to the start of any mining activities, personnel associated with the operation shall be required to attend a desert tortoise preservation awareness seminar. The awareness program shall be provided to all new employees and reviewed with all personnel quarterly.

31. Prior to disturbance in the area identified as a "blue-line stream", the applicant shall enter into a Streambed Alteration Agreement with CDFG.

32. An archaeological survey by a qualified archaeologist is required to be submitted for review and approval prior to new land disturbance in the expansion areas of both the east and west pits.

33. Submit a historical resources management report to document the survey, any subsurface testing, to document archival research, to evaluate resource significance and integrity and, if necessary, to evaluate project impacts and propose further mitigation measures to mitigate potential adverse impacts in accordance with the appropriate laws.

34. A portion of the project site is located within an area of known fossil occurrences on the paleontological resources overlay. A paleontological resource-monitoring plan shall be developed by a County approved vertebrate paleontologist, and approved by the San Bernardino County Museum prior to excavation.

35. If fossil remains are uncovered during mining, then excavations in the vicinity shall be stopped and a County approved paleontologist shall be called to remove the specimens and if warranted, additional recovery activities will be conducted.

36. The slopes of the east pit shall be remediated to bring them to an overall slope of 2:1. The slopes shall be reconstructed using the slurry and levee buttress fill method discussed in the December 26, 2002 CHJ report.

37. A slope stability testing program shall be established and employ methods and schedule as recommended in CHJ report dated August 18, 2003, and as approved by the County Geologist. This will include submittal of a fill slope construction and stability report at least every 50 vertical feet of slope or annually whichever occurs first.

38. Failure of any slope during construction will require a reevaluation of slope stability and a reevaluation of the fill placement method. The reevaluation shall include a written report that discusses the cause of the failure and presents recommendations for mitigation. The report shall be reviewed and approved by the County Geologist.

39. Maximum mined slopes shall not exceed 2:1, in accordance with the CHJ report dated December 9, 2002.

40. Berms or levees are required on both the east and west pit to control surface runoff from south of the project. Safety berms shall be placed at the top of slope above all working areas.

41. Following final reclamation of both the east and west pit, a final report prepared by the Project Geologist shall be submitted to verify the stability of finished slopes.

42. Should the Helendale fault rupture through the project, the stability of slopes shall be reevaluated by the Project Geologist prior to further operations near the ruptured area.

43. Recommendations of the approved CHJ Slope Stability Investigations shall be adhered to throughout the life of the project, as approved by the County Geologist.

44. The operator shall construct adequate measures upgradient of the project to control surface runoff in a manner commensurate with standard engineering practice. Measures will include, but not be limited to:

45. Limiting surface disturbance to the minimum area required for active operations.

46. Diverting runoff into the west pit into appropriate detention areas via downdrains.

47. Using ditches, sediment basins, and localized control and maintenance measures to intercept and control disturbed area drainage.

48. Stabilizing disturbance areas through regrading, revegetation, and other restoration practices.

49. Pumping of onsite water will remain within the parameters of the adjudicated basin rights, as outlined in the Mojave Basin Water Adjudication.

50. At the discretion of the County, recommendations from the required Drainage Study may be made project requirements.

51. Operations shall not be conducted within 20 feet of groundwater. No operations shall be conducted in standing water.

52. A noise study shall be initiated immediately upon commencement of operations in the west pit.

53. Any necessary mitigation shall be accomplished within 30 days of commencement of operations in the west pit.

54. Noise level shall be maintained at or below County Standards, per Development Code Section 87.0905(b).

55. Jake brakes shall not be used in residential areas.

56. Mitigation for impacts identified through Traffic analysis of the project and submitted reports will be incorporated into the project conditions of approval, following review and approval of the study by County Traffic Division.

57. The proposed vacation of portions of Azurite and Carnelian Roads will be assessed by the County Transportation Highway Planning and Technical Committee, with their recommendation(s) being presented to the County Planning Commission, to be considered as part of the entire project.

58. Engineered plans and permit applications shall be submitted to the County Transportation Department and Land Development for review and approval of the proposed tunnel under Meridian Road.

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